WHAT CAN BE DONE BY MEDICAL OFFICERS OF THE TERRITORIAL FORCE IN TIME OF PEACE TO PREVENT DISEASE AND FURTHER EFFICIENCY IN TIME OF WAR.

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The subject on which I have the honour to address you this evening may be divided into three heads: First, sanitary education; secondly, the collection of sanitary intelligence; and lastly, the encouragement of physical education.

The first point, then, which I would like to emphasise is the necessity of educating the men composing the Territorial army in the essentials of camp sanitation. When war breaks out, and more especially if that war takes the shape of an invasion of these islands, I need hardly say that it will come without much warning, like a thief in the night. Each member of the Territorial army will find himself suddenly transformed from a civilian into a soldier, and not only that, but a soldier in the field; for whether the first notice we get of war is the landing of a body of the enemy's troops on our shores, or the more regular, but at the same time, I may remind you, the historically less frequent, presentation of a diplomatic ultimatum, the man in the ranks of the Territorial army will find himself sleeping under his domestic roof one night, and under canvas the next, or if not under canvas in some extemporised barrack. It is not to be supposed that accommodation will be available in barracks, properly so called, since the location of troops will not be governed by the position of existing barracks but by strategical reasons, which will necessitate the formation of large camps or the housing of large bodies of troops in billets, or in barracks extemporised from large warehouses or factories, shut down in consequence of the stoppage of trade, and so on. Billeting is extremely unlikely to be resorted to in consequence of the difficulty of maintaining discipline amongst partially trained troops under such conditions. Extemporised barracks may be used in some cases, but even this is improbable, since accommodation of that kind is likely to be more useful for hospitals, stores, and so on. Therefore we must recognise that the day after mobilisation is ordered the great majority of
the men of the Territorial army will find themselves either under canvas in standing camps, or en route to them; or, if the weather be fine and the season of the year favourable, in bivouacs.

Now I wish to point out to you what this means. It means that a matter of 250,000 men in this country will pass suddenly at twenty-four hours notice from the existence of civilised men to that of savages, speaking in a purely sanitary sense. Up till that moment they will have lived the life of civilised men. The two great functions of sanitation—water supply and the removal of excreta—have up to that moment been performed for them. The turning of a tap, or the pulling of a handle, comprise all the individual effort demanded of the civilised man in these two directions. If either the tap or the handle should fail to perform their proper duties, the plumber or the turncock is at hand to rectify matters. In any case, that rectification is not in the hands of the individual man concerned. All sanitary work is performed for him by the plumber or the turncock, and unless actually in his own house, under the direction of some municipal, or urban, or other authority. But now he suddenly finds himself in a position where none of these exist. He is now individually responsible that his excreta, which can no longer be removed automatically from the neighbourhood of his dwelling, do not become a source of nuisance or danger to himself or his comrades, and he is individually, though to a somewhat less extent, directly responsible that the water he drinks is pure.

Now I wish to emphasise most strongly that the responsibility of the soldier with regard to his excreta and their proper disposal is absolutely and directly personal. It is his personal and individual business to see that they, and the potential infection they contain, do not get the slightest opportunity of contaminating his own air, water or food supplies, or what is far more important, those of his comrades. If he were the only person likely to be injured, the only person likely to die of enteric fever as the result of his carelessness, we might pass it by, and with Dogberry, "Thank God we have got rid of a knave." Unfortunately, we cannot so limit the consequences of his carelessness. The soldier who carelessly exposes himself in action risks his own life and that of no one else. The soldier who exposes himself to disease, by carelessness in the matter of disposal of his excreta, lays open to the risk of infection not only himself but every one of his comrades. His position is not so much that of the careless soldier as that of the traitor who fires into his own ranks. This
Medical Officers of the Territorial Force

may seem rather an exalted view to take of the situation, but I think if you will try and realise what the result of carelessness in the disposal of excreta means, especially if widespread in an army, you will agree with me that it is by no means too exalted a view. This is the rock on which the sanitation of all hurriedly assembled, partially trained, armies has split. It is only necessary to read the reports of Reed, Vaughan, and Shakespeare on the outbreaks of enteric fever in the army of the United States in 1897 to realise this. This rock can only be avoided by instruction in time of peace; and this instruction as regards the soldiers of the Territorial army can only be given, in time of peace, by the sanitary and medical officers of the Territorial army. This, then, is the first step in the sanitary education of the soldier. Instruction of the men and officers of the Territorial army that every man is to cover his excreta with earth directly they have been passed; and that this must be done not in an hour, nor in half an hour, nor in ten minutes, but at once. If excreta be covered the immediate danger of infection getting into the air, water, or food supplies of the force is avoided. As long as they are uncovered they are at the mercy of flies, and to a less extent in this climate, of wind. If they are covered, and covered at once, this danger at least is averted. I do not propose here to enter into the vexed question of the vitality of the bacillus of enteric fever in soil. This is probably greater than was at one time supposed. Still there is one thing certain, and that is, that as long as the germ remains buried in the soil the danger from it is more potential than actual. As long as it remains exposed to flies and wind the danger is actual and not merely potential. This knowledge must be hammered into the heads of the men in season and out of season in time of peace, and into the heads of their officers, too. The immediate burial of excreta is the first and leading principle of all camp sanitation. If this is not done no other sanitary measures will be more than a tinkering with the evil—a vain attempt to make up for a hopelessly lost opportunity. That is the first thing that the men and officers of the Territorial army should be taught; and the second is that all garbage, kitchen refuse, horse litter, and so on, should be burnt on the day of its formation. Except in extraordinarily bad weather this is possible, and in very bad weather flies are less en évidence. For of course it is against the fly that this measure, too, is directed.

The great principle here, as in the burial of excreta, is that what is to be done must be done quickly. If garbage be allowed to accumulate then it is difficult to destroy it by fire; and the
corollary is not only that it must be destroyed by fire at once, but also fairly close to the spot where it is formed. There will probably be no carriage available for the transport of rubbish to central incinerators, and therefore it must be burnt in the vicinity of the unit responsible for its formation. It is quite possible that a certain amount of annoyance may be caused by the smoke, and to a certain extent by the smell of the burning, but at the worst that will be an annoyance, an inconvenience, not a danger, and if it is a question of annoyance, the annoyance that a plague of flies causes in an ill-kept camp is a thing absolutely unique and by itself, far worse than drifting smoke or the smell of burnt garbage. The third thing that the men must be taught is moderation in drinking, I do not mean alcoholic drinks, but drinking generally. I do not believe myself that it is possible to train men to such a pitch that they shall never drink, however thirsty, simply because the water is labelled dangerous. That may be possible in some nations; I have never seen it. I can only say that, taking the average human man of our race there comes a point when drink he must, be the water good or bad. There comes a stage of thirst when even if water were labelled poison the ordinary man would willingly drink it and risk the consequences, if only to escape the intolerable torture of thirst, and have the sensation of liquid in his throat before he dies. But it is quite possible to teach men to be moderate; to teach them not to rush at water, good or bad, and drink it simply because it is there. The ordinary man suffers not from the thirst of necessity—the torturing thirst to which I have already alluded—but from the thirst of habit, and this thirst of habit he can be educated out of, and he must be educated out of it if he is to be an efficient soldier. And one of the most important points about educating him out of this thirst of habit, and one of the strongest arguments in favour of doing so, is that when he has learnt his lesson you will then know that if he complains of thirst it is the real thirst, the thirst of necessity, that he is suffering from. The corollary of course of this is, that if you teach your men to restrain the thirst of habit, you must guarantee them such a supply of pure water that they may be able to gratify the thirst of necessity, that is to replace in the blood the actual amount of water lost by perspiration and necessary for the proper working of the human engine.

Though I have been referring here to water only I should like to say a few words about temperance in this connection. Personally, I am not an advocate for total abstinence under
ordinary conditions. I would prefer to see in the ranks the men who knew when to stop, rather than the men who dare not begin. But whatever a man may be in peace, in time of war, and especially in a friendly country, the only hope of salvation is in total abstinence. There will be plenty of people only too ready to display their patriotic fervour by standing drinks to (and incidentally sharing drinks with) their gallant defenders. Fortunately, the Regular army is not in the habit of fighting except in the countries of our enemies, or else in uncivilised lands where alcohol is unobtainable, so the question of temperance on service concerns the regular soldier comparatively little. But it will concern the Territorial soldier and his officer very seriously, and unless they are prepared for it I should be sorry for the commanding officer who tried to get his regiment through a market town on its way to the front, and especially if he hoped to get it through intact and sober. You probably know Hogarth's sketch called "The March to Finchley," commemorating the march of troops from London to Finchley Common in 1745, and the drunken stragglers left behind. It will not be the fault of the men in the ranks, it will be the fault of the enthusiastic spectator, who will not understand that a drunken soldier is no soldier when it comes to fighting and marching. This is hardly even a medical question, it is more one of discipline, but having mentioned the subject of temperance in drinking water, I felt I ought not to let this other phase of drinking go unmentioned.

Before leaving this part of my subject I should like to refer to one point which, in my opinion, is closely connected with the prevention of disease in war, and that is preventive inoculation against enteric fever. That every young man who is going to be exposed to the risks of campaigning should be inoculated is my firm belief. As a practical measure, extended to all ranks of the Territorial army in time of peace (it would be impossible to perform the inoculation after the war had broken out), there are great practical difficulties in the way. There are, as you know, plenty of people obsessed by the idea of the essential sin of self-defence against human enemies, and if to these we add their intellectual first cousins, equally obsessed with the idea of the essential sin of self-defence against disease, we shall not smooth to any great extent the path of those who are working for a strong and efficient National army. Still, of the benefits of inoculation there can be no doubt to anyone who studies the evidence, and if the prejudice against it is ever to be removed, the medical officers
of the Territorial army are in a better position to effect it than any other body of men in the country.

These points of education, therefore, are the first methods by which the medical and sanitary officers of the Territorial army can during peace further efficiency in time of war; for remember that this education must take place in time of peace or not at all. Once the Territorial army is mobilised there will be no time for education in anything but fighting. No commanding officer can then afford a minute of the short time remaining to him in which to train his unit (and that time will not be one minute too long, or one minute longer than the enemy can manage to make it). He cannot afford one minute of that short time for any other purpose than battle training, not even for a purpose so important as training in sanitation. So that if your men go into the field untrained in that, more especially in the simple routine of personal conservancy, untrained they will remain. And the logical and inevitable consequence of that want of training will be, I think I am moderate in saying, 5,000 cases of enteric fever in the Territorial army by the end of the first month of mobilisation, and I should be inclined to say, 5,000 deaths from the same disease in the first six months; and the responsibility for that loss will rest in the first place on those officers—medical and sanitary—of the Territorial army who have not taught their men, before war broke out, how they must conduct their personal sanitation after they go into the field.

How this instruction is to be imparted will be more or less a matter for local arrangement. It will be necessary to lecture the men to explain the rough principles, but of course the best training in field sanitation, as, indeed, the best training in all the operations of war, is actual practice on manoeuvres or in camp.

I now come to the collection of sanitary intelligence; and this is a matter in which not only the medical officers of the Territorial army can help us, but in which all the country practitioners of the British Isles can take a share. There have been, except on manoeuvres, no great movements of troops in these Islands since the invasion by Prince Charles Edward in 1745, one might almost say the Battle of Worcester. In a military sense the country, speaking from the point of view of the military sanitarian that is, is a terra incognita. Now, there is no body of men better placed to collect the information necessary to dispel this ignorance than the medical practitioners of the country districts, and the information
we need is as follows: Firstly, as regards camp grounds. We want to know in what parts of each county are good open spaces where troops can camp. A list should be made of these for each county, giving the following details: To begin with, position. This should be given first, by distance from two well-known towns on a main road. Then should follow more accurate local details of position, which will, I regret to say, be best given by reference to some licensed house of refreshment in the vicinity. Then the area, roughly, in acres; condition of the surface, as grass, heather, gorse, and so on, whether lately or ever under cultivation. Configuration of site, whether level or gentle slope, and in that case aspect, whether liable to floods; whether sheltered by woods or exposed; nature of soil, and geological formation. Lastly, water supply, its nature, whether from a well, stream, or large pond, the possibilities of pollution and probable quantity of supply available in ordinary weather. After camp grounds we should require information as to roads. Of course, this already exists to a large extent in the excellent road-books of the Cyclists' Touring Club, but the information needs amplifying by the addition of sanitary information, and more especially as regards water supply along each road. Every stream crossing the road should be mentioned, with the nature of the water, whether markedly polluted or not above the crossing, average dry weather flow, and so on. The position of any large reservoirs or good wells in the vicinity of the road should also be noted. With such information it would be possible for an officer marching a body of troops from, say, Newbury to Oxford, to make up his mind where he could safely halt for his men to have their mid-day rest and replenish his water-carts.

The third item of information would refer to water supply only. Each river or brook should be taken from its origin and traced mile by mile downwards, the existence of any marked source of pollution and its exact position and distance being noted. A strange officer going into a county to make a survey of this nature would be greatly handicapped by ignorance of local conditions, while any general practitioner in the locality could probably give the information off-hand by simply following the course of the stream on the map. The information already mentioned refers, of course, to conditions of camp and the march, but information about towns would also be of use, especially in respect of towns as regards site, not of the first degree of importance. What we should want to know would be the conservancy systems and water supplies of these towns, and how far these might be capable of
expansion or of standing any sudden strain. Large towns, such as the great manufacturing towns, could probably admit of a considerable influx of troops without difficulty, but smaller country towns, such, for instance, as Dorking, Guildford, or Ipswich, would probably find some difficulty in arranging for the sudden influx of ten or fifteen thousand men, an occurrence not impossible in the case of any one of these towns, having regard to their strategical positions. In the towns themselves we should need to know the existence and position of large warehouses or factories which could be made into improvised barracks and hospitals, and the possibilities of putting up the necessary sanitary fittings and connections with the assistance of local plumbers.

Other points on which information might be of great value there are, but I will not dilate on them now. Those I have mentioned are the most important, and a systematised knowledge of these might save endless trouble in the last rush of mobilisation and war.

There is one last point that I should like to touch on, and that is, perhaps, a little away from the trend of my paper. I refer to National Physical Education. There is no doubt that the ordinary man of the class from which we recruit the ranks of the Regular army, and to a less extent, though still to a certain extent, the classes from which the rank and file of the Territorial army will be drawn, do suffer from a want of ability to get the best use out of their limbs. I was told by the Inspector of Gymnasia the other day that the ordinary country lad when enlisted could not perform to order such a very simple evolution as is conveyed in the words, "Take three steps forward starting on the left foot, and then hop twice on the left foot." The wrong foot would inevitably be chosen to start from, three very uncertain, awkward steps taken, and the hops at the end would not come off at all. The man would possess an equal inability to walk straight along a chalk line drawn along the floor. After a few steps he would be crouching down to keep his balance. The fact seems to be that the recruit as he enters the Army possesses a vocabulary of movements even more limited than his vocabulary of words. Consequently, an appreciable portion of his short term of Colour Service has to be devoted to learning how to use his limbs, to co-ordinate these to his intellectual apparatus, so that a definite order received from an instructor shall be translated into a definite and well-balanced movement. Now there is, in my opinion, a very definite obligation on the part of medical and sanitary officers of the Territorial army, and not only on their part, but on that of the general practitioners of the country,
Medical Officers of the Territorial Force

to encourage the introduction of general physical education throughout the country. There is in existence a National League for Physical Education and Improvement, which is working at present under the aegis of the Education Department towards the introduction of some such compulsory system. As a member of one of the working sub-committees of the League, I should like to take this opportunity of bringing its work to your notice. The more the children of the nation are educated to use their limbs, the better fitted the boys will be to become soldiers when they grow up, and the less time will they have to waste after enlistment before they can learn to use their rifles.

DISCUSSION.

Lieutenant-Colonel C. P. Oliver thanked Colonel Melville for his suggestive paper, and remarked that probably all those who had listened to it were convinced of the paramount importance of personal sanitation. All Territorial medical officers should exercise their influence in bringing home to the combatant officers the immense value of the strictest attention of all ranks to this point. He remarked that he had lately had personal experience of the light and airy fashion in which combatant officers of the Territorial Force treated the subject, and of the general apathy that pervaded the commissioned ranks in matters of sanitation. Not only was this apathy evinced when the question of the disposal of excreta and offalage was insisted on, but also when the food supplies were inspected in the morning, more than one stating it was very nauseating to him to inspect raw meat! When, however, it was discovered that the medical officers were sincere in their opinion of the great necessity of attending to these points, and had the courage of their convictions by keeping a close watch on the food supplies and on the condition of the latrines morning after morning, then they found very willing and loyal helpers in the erstwhile negligent officer. He felt convinced that there was a splendid opportunity for the Territorial medical officer to educate and also to gain the sympathy of the combatant officers in this direction. It was surprising how with but fifteen days at one's disposal, the men of the medical units realised the importance of a clean camp, and how keen and faithful they soon became in carrying out orders to ensure this. With reference to the latter part of the paper, in which comment was made on the physical deterioration of the recruit, Lieutenant-Colonel Oliver remarked that he looked for a great improvement in the physique of the rising generation as a direct result of the medical inspection of children attending the public elementary schools. This was the class from which practically the whole of the recruits were drawn, and if the Act is carried out in the spirit in which its promoters intended nothing but good could result.
Lieutenant-Colonel J. Harper thanked Colonel Melville for his very useful paper, and for showing Territorial medical officers the lines on which they could be usefully engaged during peace in preparing for war. The lecturer had pointed out the fundamental hygienic importance of the individual attending to his own excreta. The practical difficulty was now to teach this lesson to the officers and men of the combatant branches, who constitute the vast majority of the whole force, and are lamentably careless—probably through ignorance—on this point. Must they be taught by individual effort only, or should not this be backed by regulations or Army orders on the subject? With regard to inoculation for enteric, the practice of which was urged by the lecturer, inasmuch as the protective effect is only temporary, at which period of his service did the lecturer propose that the Territorial soldier should be inoculated so as to be ready for a war, the date of which was uncertain? He regarded the paper as a most useful and timely one.

Colonel A. Clark said he had not intended to speak on this subject at all, as he knew very little as regards sanitation, and besides he had not given much attention to the subject. There was one point he should like to mention, and that was with regard to inoculation. He certainly misunderstood Colonel Melville as regards the period, as he was under the impression that it only lasted for a limited time, and he did not see how it could be well carried out till a few days ago. Then he might also mention the difficulty medical officers had in showing the combatant officers the necessity for sanitary care. Indeed, up to comparatively recently, he thought combatant officers did not really pay attention to the Medical Department of the Volunteer army as they should do; but they saw differently now, and he thought things were proceeding better from the sanitary point of view. Indeed, at the camp at Salisbury last year, he was struck by the interest they took in medical and sanitary matters, and extra facilities seemed to be given last year to what had been given before.

Major W. S. Harrison said: I was glad to hear Colonel Melville refer to the necessity of inoculation against enteric fever. I think one can safely say that the protection afforded by inoculation will last for at least two years, and, as a matter of fact, I have found traces of the results of inoculation in the blood of men who had been inoculated seven years previously, though whether the protective substances were then in sufficient quantity to prevent infection it was impossible to say. Recent statistics have shown that inoculated men get enteric fever six to eight times less frequently than those who have not been inoculated, and it is a matter for those in authority to decide whether they are prepared to go into the field with an unprotected army, and have six to eight times more enteric fever than they need have or would have if they insisted on inoculation before mobilisation. This would have to be done...
during peace time, for it would be impossible to carry it out after the outbreak of war. As regards the education of the troops in sanitation, this is very necessary. In camp, fluid excreta are deposited everywhere; as soon as it is dark no one thinks of using the proper urinals. Everyone, officer and man, micturates immediately outside his own tent. I have even seen a general officer doing it. Now it is said that some 20 per cent. of typhoid convalescents have typhoid bacilli in their urine, and that of these about 3 per cent. remain infective for some years. I made a rough calculation on one occasion that, in India, there must be at least one man in each battalion who is excreting typhoid bacilli in his urine. These bacilli are poured on to the ground, they get on the men's boots, are carried into their tents and shaken up with their blankets; and they remain alive for a long time. Even in India, where the sun is much more powerful than in this country, you can recover typhoid bacilli from the earth three days after it has been infected with a growth of the organism in urine. It should be considered a most serious crime for anyone, officer or man, to micturate on the ground of a camp, except in the appointed places. There is another matter which Colonel Melville did not refer to, that is the necessity for protecting the Territorial army against small-pox. I take it that at present very few of the men have been re-vaccinated. I had the curiosity to look up some figures about small-pox to-day. In the American Civil War, the Northern army, which was very similar in constitution to our Territorial army, had 18,962 cases, and 7,058 deaths; the Confederate army of Northern Virginia in fourteen months had 2,513 cases, and 1,020 deaths from small-pox. In the Franco-Prussian War, the German army of 913,967 men lost only 278 men from this disease, whilst the French army, who were badly protected, lost no less than 23,400 men from small-pox. In the Siege of Paris the French losses from small-pox were 6·76 per cent., and it is reported that German wounded lying alongside French wounded escaped the disease, whilst the latter were heavily attacked. These figures make one think! I would say in conclusion that, in my opinion, no army which is not adequately protected against small-pox and against enteric fever is properly prepared for war.

Colonel MacPherson said: The only criticism I would venture to make on Colonel Melville's paper is that it is too short. I should like to have heard him say something more about other conditions likely to affect the Territorial Forces in time of war, and not so much from the pointed view of camp sanitation. We know, and are learning, a very great deal about camp sanitation, so that education in this subject is a simple matter now, and there ought to be no difficulty in training the Territorial Force in this subject. I do not think, however, that it is camp sanitation which is our chief difficulty in this country. In case of war, large standing camps would, I imagine, be avoided, and the method of accommodating the Territorial Force would probably be in buildings.
What I should like to have heard Colonel Melville tell us is something about the sanitation of billets, a subject not dealt with in this country at all, and what precautions to take and what matters to consider in billeting areas. I think it is an important question to take up. Then, as regards enteric fever in this country, Colonel Melville said that there would be 5,000 cases within a month. I do not think that would be the case. I do not wish to minimise the importance of enteric fever for one moment, but I do not think we should have 5,000 cases in the first month of a war in this country. The experience of all wars shows that enteric fever in military operations is obtained in two ways, either by men suffering from or incubating enteric coming from their homes on mobilisation into barracks or into camps, or by troops operating in districts where enteric fever is prevalent amongst the civil inhabitants, either as an epidemic, but more especially as an endemic disease. In this country we have very little enteric as an endemic disease; nor does the Army itself suffer much from enteric at home. In European war, such as the Franco-Prussian War, enteric fever was not very prevalent, and I believe we should probably have still less experience of it in a war in this country, in which the Territorial Force might be engaged. On the other hand, the remarks of Major Harrison as to vaccination are very important; I was going to make similar observations myself, but he has anticipated me.

Surgeon-General Gubbins said: There are three points in connection with Colonel Melville's interesting lecture I would like to touch on, viz., the inoculation of Territorials, the collection of information as regards camps, and lastly, the education of regimental officers and men in personal hygiene and sanitation.

Now as regards the antityphoid inoculation of Territorials; I look upon this as impracticable and it would be most unpopular. To expect thousands of men to submit to vaccination against a possible attack of enteric fever on the eve of invasion is chimerical, and it must be borne in mind that the fate of the country would be decided— one way or the other—in a few weeks. Even in India we have great impediments in pushing the system, notwithstanding the fact that the troops are under strict discipline, that many Commanding Officers and, I hope, all Medical Officers, are enthusiastic on the subject; moreover, the disease is daily staring all ranks in the face. If such are our difficulties in a country where everything is in favour of developing antityphoid inoculation, how much greater would they be when dealing with a force where the above conditions would be entirely absent? I may add that I am personally a firm believer in the system, but it should only be carried out in those countries where the disease is endemic.

Next, as to the collection of statistics and information as regards camps in the United Kingdom by civil practitioners. I much fear that these gentlemen have neither the leisure nor necessary knowledge or equipment to do so. I do not possess sufficient acquaintance with the inner working
of the Intelligence Branch at the War Office, but I am inclined to think that they are the proper people to deal with this item: of local authorities, I would imagine that the various Medical Officers of Health would be able to supply valuable information.

Coming to the last point, viz., the education of all ranks in personal hygiene and sanitation, I am entirely in accordance with the views of the lecturer. In this direction Council Schools can do a great deal in training the youths who will hereafter join the ranks of the Territorial Force. I need only mention one item, viz., the care of teeth. From my past experience of the condition of the boys' teeth in a large military school in London, and recently of 5,000 children of British soldiers on the Indian Establishment, where in both instances 90 per cent. of these young people required dental treatment, I am convinced that much can be done in their youth to remedy a state of things that is most unsatisfactory. I understand that the Education Committee of the London County Council is about to grapple with this question, and not before it is wanted. As a great surgeon in the past truly said, "A nation with bad teeth is a nation doomed to decay." In the Regular army we have made a great stride by the issue of tooth-brushes to every recruit on joining: it only remains for medical and regimental officers to see that good use is made of these articles. As to camp sanitation, there is no doubt that the Medical Officers of the Territorial Force are fully alive to its importance, and we must only hope that the staff and regimental officers will fall into line and follow the example of their brethren in the Regulars, who have made remarkable strides in this direction in the last few years, as I can personally testify.

Lieutenant-Colonel Cotrell thanked Colonel Melville for his interesting paper, and said he considered his brother officers of the Territorial Forces might do good work by impressing on men when joining, the great importance of always wearing well-fitting broad-toed boots. Nearly all civilians' boots were too narrow and too short. He also said he was very glad Colonel Melville had raised the question of drinking, not only of alcoholic preparations but of all fluid. Drinking was a habit and could be and should be trained. If men began the day by drinking the contents of their water-bottle they would certainly suffer far more than the men who abstained from what was undoubtedly a vicious habit.

Major J. Ritchie considered that the education of the officers and men in the elements of sanitation was the most important duty of the Territorial medical officer. Unless the men acted with the sanitary officer all his efforts were baulked. The Territorial medical officers who had spoken seemed to despair of convincing combatant officers and men of the importance of sanitation. He had shared this attitude himself until recently, but his experience of camps convinced him that the sanitary lectures given during the last few years had borne fruit in great attention to sanitation both by officers and men in the Regular army. No doubt
were such lectures instituted in the Territorial Force, it would follow in
the footsteps of the Regular army. He suggested that during route
marches no water-bottles should be carried, and no men allowed to fall
out to drink. They would soon learn how easy it was to do without
drinking, and how much better they would march. Compulsory inocula-
tion of recruits against enteric fever was at present an impossible ideal.
All medical men might be said to agree as to its efficacy, but in a country
where public opinion allowed a few dunderheads to keep their children
unvaccinated, and thus be the focus for the spread of a loathsome disease,
it was idle to expect that compulsory inoculation against enteric would be
permitted either in a citizen or regular army, more especially as to be of
any value the inoculation must be submitted to every two years.